

Enrico Casella

PHD CANDIDATE · COMPUTER SCIENCE

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Professional Experience

- 2019-
Present **Ph.D. Computer Science - Research Assistant**, University of Kentucky
- 2018-2019 **Ph.D Computer Science - Teaching Assistant**, University of Kentucky
- 2017-2017 **Visiting Research Scholar**, Missouri University of Science & Technology

Publications

PEER-REVIEWED JOURNAL ARTICLES

3. M. C. Cantor, **E. Casella**, S. Silvestri, D. L. Renaud, J. H. C. Costa, "Using Machine Learning and Behavioral Patterns Observed by Automated Feeders and Accelerometers for the Early Indication of Clinical Bovine Respiratory Disease Status in Prewaned Dairy Calves" in *Frontiers in Animal Science*, Vol. 3, 2022.
2. **E. Casella**, M. Ortolani, S. Silvestri, S. K. Das, "Hierarchical syntactic models for human activity recognition through mobility traces" in *Springer Personal and Ubiquitous Computing*, Vol. 24, Issue 4, pages 451-464, 2019.
1. **E. Casella**, A. R. Khamesi, S. Silvestri, "A framework for the recognition of horse gaits through wearable devices" in *Elsevier Pervasive and Mobile Computing*, Special Issue on Mobile and Social Sensing, Vol. 67, 2020.

CONFERENCE PROCEEDINGS

5. **E. Casella**, E. Sudduth, S. Silvestri, "Dissecting the Problem of Individual Home Power Consumption Prediction using Machine Learning" in *Proceedings of the IEEE International Conference on Smart Computing (SMARTCOMP)*, 2022 - WiP section
4. **E. Casella**, M. C. Cantor, S. Silvestri, D. L. Renaud, J. H. C. Costa, "Cost-aware Inference of Bovine Respiratory Disease in Calves using Precision Livestock Technology" in *Proceedings of the IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS)*, 2022. *Acceptance rate: 30.95% (13/42 accepted papers)*
3. **E. Casella**, A. R. Khamesi, S. Silvestri, D. A. Baker, S. K. Das, "HVAC Power Conservation through Reverse Auctions and Machine Learning" in *Proceedings of the IEEE International Conference on Pervasive Computing and Communications (PerCom)*, 2022. *Acceptance rate: 10.11% (18/178 accepted full papers)*
2. M. Cantor, **E. Casella**, S. Silvestri, D. Renaud, J. H. C. Costa, "Using machine learning and precision livestock farming technology for early indication of health status in preweaned dairy calves" in *Proceedings of the European Conference on Precision Livestock Farming (ECPLF)*, 2022.
1. **E. Casella**, A. R. Khamesi, S. Silvestri, "Smartwatch Application for Horse Gaits Activity Recognition" in *Proceedings of the IEEE International Conference on Smart Computing (SMARTCOMP)*, 2019

IN PREPARATION/UNDER SUBMISSION

- E. Casella**, S. Silvestri, D. A. Baker, S. K. Das, "A Human-Centered Power Conservation Framework based on Reverse Auctions and Machine Learning", submitted in *IEEE Transactions on Smart Grids*.
- E. Casella**, M.C. Cantor, S. Silvestri, J. H. C. Costa, M. Woodrum "Using Precision Livestock Technology and Machine Learning for Cost-Aware Inference of Bovine Respiratory Disease Development and Recovery", to be submitted in *IEEE Access*.
- L. Monteiro, X. Tao, **E. Casella**, M.S. Cortasa, S. Silvestri, "Machine Learning Prediction of Soy Bean Yield Output based on Environmental Characteristics and Variety Types", to be submitted.

Awards, Fellowships, & Grants

- 2022 **Best Poster Award**, Computational Commonwealth Summit by University of Kentucky's Center for Computational Science (CCS)
- 2022 **Initiative Award**, Graduate Student Association of Computer Science at University of Kentucky
- 2022 **Thaddeus B. Curtz Memorial Scholarship**, University of Kentucky
- 2020 **Best Poster Award**, Computational Commonwealth Summit by University of Kentucky's Center for Computational Science (CCS)

Mentoring

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|------------------|--|-----------------------------------|
| 2023-
Present | Alexander Barrera , Ph.D. Student | <i>University of
Kentucky</i> |
| 2022-
Present | Tao Xu , Ph.D. Student | <i>University of
Kentucky</i> |
| 2021-2022 | Sudduth Eleanor , Undergraduate Student | <i>University of
Kentucky</i> |
| 2021 | Hoang Duong H. , Undergraduate Student | <i>University of
Kentucky</i> |

Outreach & Professional Development

TECHNICAL PROGRAM COMMITTEE MEMBER

ACM 24th International Conference On Distributed Computing And Networking (ICDCN 2022, 2023)
IARIA 10th International Conference on Advanced Communications and Computation (INFOCOMP 2020)

JOURNAL PEER REVIEW

IEEE Transactions on Mobile Computing; IEEE Access; IEEE Internet of Things; IEEE Human-Machine Systems; Elsevier Pervasive and Mobile Computing; Elsevier Ad-hoc Networks; Elsevier Sustainable Energy, Grids and Networks; Springer Reliable Intelligent Environments.

CONFERENCE PROCEEDINGS PEER REVIEW

IEEE International Conference on Distributed Computing Systems (**ICDCS**); IEEE Global Communications Conference (**GLOBECOM**); IEEE International Conference on Distributed Computing in Smart Systems and the Internet of Things (**DCOSS**); IEEE International Conference on Communications (**ICC**); IEEE International Conference on COMMunication Systems NETWORKS (**COMSNETS**); IEEE International Conference on Smart Computing (**SMARTCOMP**); IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (**LCN**); IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (**WiMob**); IEEE International Workshop on Smart Service Systems (**SmartSys**); IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (**WoWMoM**); IEEE/ACM International Symposium on Quality of Service (**IWQoS**).

OUTREACH

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| Nov 2022 | 2022 ICNP , Student Volunteer | <i>Lexington, KY</i> |
| 2022-
Present | Graduate Student Association of Computer Science (GSACS) , President | <i>University of
Kentucky</i> |
| 2021-2022 | Graduate Student Congress , Mental Health Committee Member | <i>University of
Kentucky</i> |
| 2021-2022 | Graduate Student Association of Computer Science (GSACS) , Representative | <i>University of
Kentucky</i> |